

REMARKS

With this response, applicant amends claims 1-14, 16-18, 20-22, 24-26, 28-31, cancels claim 19 without prejudice, and presents new claims 32-36, including three new independent claims. Therefore, consideration and allowance of presently pending claims 1-18 and 20-36 is respectfully requested.

Summary of Claim Rejections

In this Office Action, the Examiner (1) has rejected all of the claims, claims 1-31, under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,427,947 to Dalos, (2) has rejected claims 1-31 under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,615,707 to Zittel et al., and (3) has rejected claims 1-31 under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,263,785 to Zittel et al.

Remarks Directed to Patentability

Independent Claim 1

Independent claim 1 has been amended to define applicants' invention to help make clear why it defines over the prior art, including the cited prior art of record. As such, independent claim 1 is believed presented in condition for allowance and its allowance is respectfully requested.

Dalos, U.S. Patent No. 5,427,947

Dalos, U.S. Patent No. 5,427,947, fails to disclose, teach or suggest the claimed invention, alone or in combination with any other reference of record, including Zittel et al., U.S. Patent No. 6,615,707 and U.S. Patent No. 6,263,785. For example, Dalos fails to disclose, teach or suggest at least the following: (1) a perforate product processing chamber, (2) a perforate product processing chamber carried by a frame having a sidewall spacing apart frame end plates and being separate from the product processing chamber, and (3) an auger drive carried by one of the end plates such that the drive is located inboard of the end plates, i.e. between the end plates, such that it also overlaps part of the product processing chamber. For at least these reasons, claim 1 is believed to distinguish over the Dalos reference.

Unlike the claimed invention, which requires a perforate product processing chamber, Dalos discloses a rotary composting device having an environmental chamber 60 formed by a cylindrical container 62 that is not perforate because the chamber 60 is sealed during product processing.¹ *See, e.g.*, Dalos, col. 15, lines 27-39.

In addition, Dalos fails to disclose a product processing chamber that is carried by a frame formed by endplates spaced apart by at least one sidewall. To the extent that the cylindrical container 62 disclosed in Dalos corresponds in any way to the claimed product processing chamber, Dalos fails to disclose, teach or suggest any structure that in turn corresponds to the “at least one sidewall” recited in claim 1.

To the extent that the motor 76 attached to a front support plate 72 of the composter disclosed in Dalos corresponds to the drive defined in claim 1, it is not located inboard, i.e., between the front support plate 72 and rear support plate 74, as is required by claim 1. Because the motor 76 is not located between the support plates 72 and 74, it logically stands to reason that it therefore also cannot overlap any part of the product processing chamber 60, which claim 1 further requires.

By the drive of claim 1 being located between the end plates and in overlapping relationship with part of the product processing chamber, it advantageously achieves a smaller footprint configuration than that achieved by the composting device disclosed in Dalos. Because the motor 76 disclosed in Dalos extends outwardly away from the front surface of the composting device’s front support plate 72 in a direction that also points away from the rear support plate 74, the motor is not located inboard and in overlapping relationship with any product processing chamber like the claimed invention defines.

Zittel, et al., U.S. Patent No. 6,615,707

¹ While the Dalos patent uses part number 60 to designate “environmental chamber” as being the composting device to which the patent is directed, applicants are using the term “environmental chamber” and part number 60 in its Remarks Directed to Patentability in reference to the space within the cylindrical container 62 in which material is actually composted during operation of the composting device.

Zittel et al., U.S. Patent No. 6,615,707, also fails to disclose, teach or suggest the claimed invention, alone or in combination with any other reference of record, including the Dalos patent and Zittel et al., U.S. Patent No. 6,263,785. For example, as with Dalos, the Zittel '707 patent fails to disclose, teach or suggest an auger drive carried by one of the pair of end plates such that the drive is located inboard of the end plates and also in overlapping relationship with part of the product processing chamber. As is shown in Fig. 2 of the Zittel '707 patent, its motor 62 sticks out from end plate 12 away from its front surface and away from the opposite end plate 13 such that it simply cannot overlie the rotary processing apparatus 49 (Fig. 2) and achieve the more compact rotary food product processing device footprint configuration the claimed invention advantageously produces.

Zittel, et al., U.S. Patent No. 6,263,785

Zittel et al., U.S. Patent No. 6,263,785, also fails to disclose, teach or suggest the claimed invention, alone or in combination with any other reference of record, including the Dalos patent and the Zittel '707 patent. For example, as with Dalos and the Zittel '707 patent, the Zittel '785 patent fails to disclose, teach or suggest an auger drive carried by one of the end plates such that the drive is located inboard of both end plates and also in overlapping relationship with part of the product processing chamber. Neither the drawing figures nor the text of the Zittel '785 patent disclose, teach or suggest at least these claim limitations.

In addition, the Zittel '785 patent fails to disclose a frame that includes end plates and at least one sidewall. The frame 34 disclosed in the Zittel '785 patent is a tubular frame made of posts and struts attached to form a cage-like structure that is separate from end walls 36 and 38 and tank-forming sidewall 40 of the disclosed rotary blancher 20. *See* Figs. 1 and 2 of the Zittel '785 patent.

Conclusion

For at least these reasons, it is believed that none of the references of record, including the Dalos, Zittel '707 and Zittel '785 patents, alone or in combination with each other or any other cited reference of record, discloses, teaches or suggests the claimed invention defined in

independent claim 1. As a result, applicants respectfully assert that independent claim 1 is presented in condition for allowance and allowance of claim 1 is therefore requested.

Dependent Claim 2

Dependent claim 2 has been amended to better define applicants' invention. As amended, this claim also distinguishes over the prior art, including the prior art of record. As such, claim 2 is believed presented in condition for allowance independent of the reasons for allowance of independent claim 1 and its allowance is respectfully requested. In addition, claim 2 is believed presented in condition for allowance because it ultimately depends from independent claim 1, a claim that is believed presented in condition for allowance.

For example, to the extent that Dalos discloses a drive arrangement, i.e., drive gears 170 and 180 and tubular drive shaft extension 174, the drive arrangement is not set or oriented at an angle relative to the drive, i.e., motor 76, because these components of Dalos are inline with the motor 76. Since the tubular drive shaft extension 174 of the driveline disclosed in Dalos is axially inline with and attached to the drive shaft 178 of the motor 76, it is not set or oriented at an angle relative to the motor 76, including its drive shaft 178.

In addition, even if it is assumed for a moment that Dalos somehow meets the aforementioned "drive arrangement disposed at an angle relative to the drive" claim limitation (which applicants assert it does not) recited in claim 2, it does not disclose, teach or suggest the drive arrangement "being disposed adjacent and along one side of the same end plate that carries the" auger drive as claim 2 further requires. This is because the drive arrangement disclosed in Dalos extends perpendicular to the front support plate 72 (which is the support plate 72 to which motor 76 is mounted) of the chamber 60 such that even if it is assumed for argument's sake it is located adjacent the support plate 72, it does not extend along one side of the plate 72 as claim 2 requires. As is shown in Fig. 4 of Dalos, since the drive shaft extension 174 extends perpendicular to support plate 72, it stands to reason that it cannot extend along a side of the support plate 72.²

² This also further shows that the "drivetrain disposed at an angle relative to the drive" recited in claim 2 is not found in Dalos.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claim 3

Dependent claim 3, which depends from claim 2, has also been amended to better define applicants' invention. As amended, this claim also distinguishes over the prior art, including the prior art of record.

For example, to the extent that Dalos arguably discloses a drive arrangement as defined above in claim 2, which applicants contends Dalos does not, the purported drive arrangement of Dalos lacks an endless flexible member, such as a belt, cable, chain, or the like, that couples "a drive wheel mounted to an output shaft of the drive" and a "driven wheel" "in operable communication," e.g. connected or linked, with the auger," as is required by claim 3.

Therefore, for at least these additional reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claim 4

Dependent claim 4, which depends from dependent claim 2, has also been amended to better define applicants' invention. As amended, this claim also distinguishes over the prior art, including the prior art of record.

As previously mentioned in applicants remarks directed to patentability of independent claim 1, both Dalos and Zittel '785 fail to disclose a pair of end plates spaced apart by at least one sidewall and forming a frame of the rotary product processing device. In addition, both of these references also fail to disclose, teach or suggest such a frame assembly that also comprises a housing that houses the product processing chamber and auger.

Dalos, Zittel '707 and Zittel '785 also each fail to disclose, teach or suggest a rotary product processing device in which the same end plate that carries the auger drive also forms at least part of a drive arrangement housing that substantially encloses the drive arrangement. In Dalos, the purported drive arrangement is located underneath the environmental chamber 60

where product processing occurs. It is not housed by either support plate 72 or 74 as it is visible and exposed along either side of the composting device of Dalos.

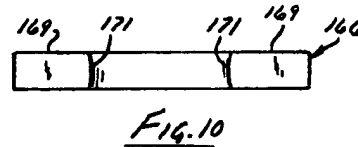
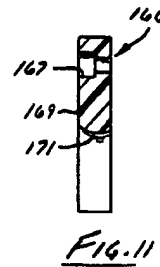
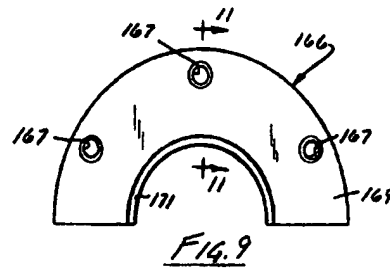
Any purported drive arrangement disclosed in Zittel '707 is also similarly deficient because it is exposed frontward of the front end plate 12 and therefore not housed by anything. In addition to Zittel '785 failing to disclose, teach or suggest specific particulars about a drive or even a drive arrangement, it also fails to disclose, teach or suggest anything about where or whether such components would be located or otherwise housed.

Therefore, for at least these further reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claim 5

Dependent claim 5, which depends from independent claim 1, has also been amended to better define applicants' invention. As amended, this claim also distinguishes over the prior art, including the prior art of record. As such, claim 5 is believed presented in condition for allowance independent of the reasons for allowance of independent claim 1 and its allowance is respectfully requested. In addition, claim 5 is believed presented in condition for allowance because it ultimately depends from independent claim 1, a claim believed presented in condition for allowance.

Claim 5 defines a generally U-shaped bearing cradle that has a generally U-shaped bearing surface that is presented so it faces toward a rotary journal rotatively supporting the journal during rotation.

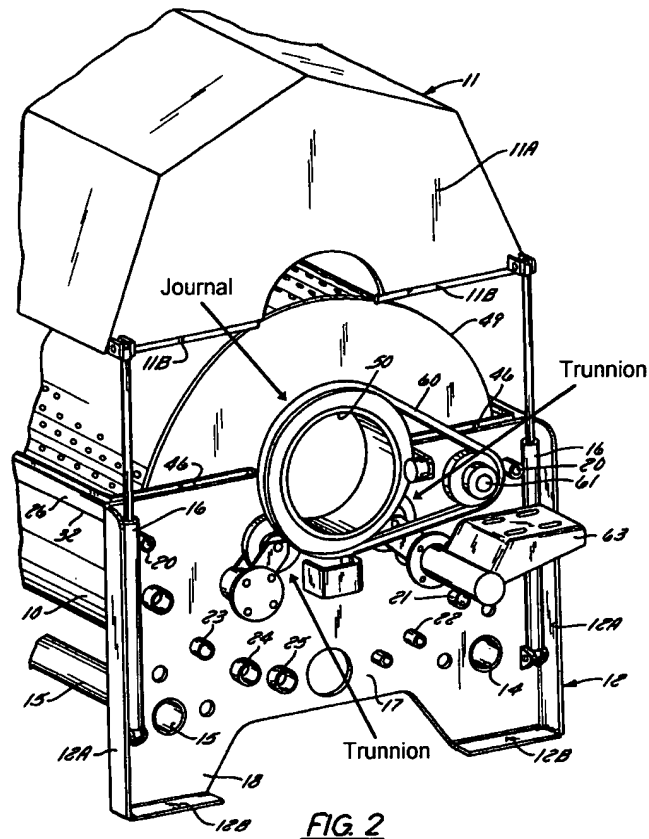


An example of a preferred generally U-shaped bearing cradle embodiment is the upside-down oriented bearing cradle 166 depicted in above-reproduced Figs. 9-11 of applicants' above-identified presently pending application. Where the journal engages the bearing cradle 166 at a different angle, the claimed invention accommodates a bearing cradle orientation different from that shown in applicants' Fig. 9 reproduced above. For example, where oriented with its generally U-shaped bearing surface 171 upside-up, gravity can keep the journal seated in the bearing cradle 168 (applicants' Fig. 2) with at least part of the journal contacting at least a part of the bearing surface 171 of the bearing cradle during rotation as a result.

Dalos fails to disclose, teach or suggest a generally U-shaped bearing cradle, let alone one that is of one-piece and unitary construction and carried by an end plate presenting a generally U-shaped bearing surface so it faces toward a rotary journal such that it rotatively supports the journal when the journal rotates during device operation. In Dalos, each one of its seal bearings 68 and 70 is annular or circular, not generally U-shaped. This contrasts with the claimed invention which permits such a generally U-shaped journal rotation supporting bearing surface to be positioned only where needed and serviced, such as by replacement, as wear indicates. Where a plurality of generally U-shaped bearing cradles are employed, it also enables them to be swapped or alternated, including mounting them in different angular positions relative to the journal, to compensate or balance for wear.

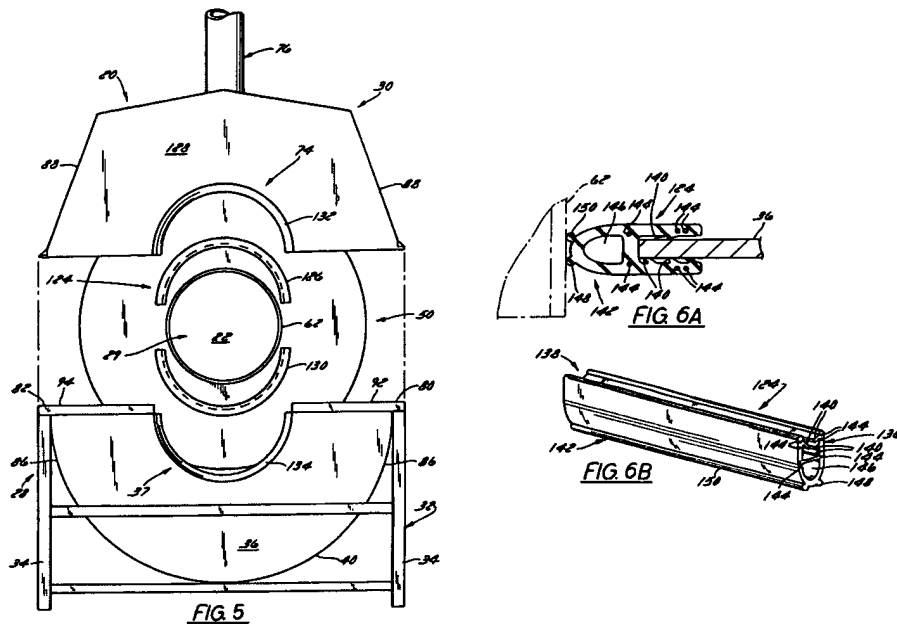
Zittel '707 does nothing to cure the deficiencies of Dalos. Zittel '707 fails to disclose, teach or suggest any kind of a U-shaped bearing arrangement, let alone one that also is of one-

piece and unitary construction. Zittel '707 also fails to disclose, teach or suggest a bearing having a generally U-shaped rotation supporting bearing surface.



In fact, in the above-labeled rotary product processing device depicted in Fig. 2 of Zittel '707, each one of the pair of trunnions illustrated is of the same construction as the trunnions discussed in applicants' Background of the Invention section. As is clearly shown above, neither the bracket nor the rotary bearing wheel of each trunnion is U-shaped, let alone has a bearing surface that is U-shaped. Rather, each trunnion bearing wheel is circular or round.

Zittel '785 is likewise deficient as it too discloses a rotary product processing device that also employs the same trunnions as disclosed in Zittel '707 and discussed in applicants' Background of the Invention section.



Although Fig. 5 of Zittel '785 (reproduced above) discloses a seal 124 formed by a pair of generally U-shaped sealing strips 126 and 130 having various seal cross sectional configurations as illustrated in Figs. 6A-6F (Figs. 6A and 6B), the seal 124, including either one of its sealing strips 126 and 130, is not a bearing and does not rotatively support the journal 62 of the rotary product processing device. This is because, as shown in Fig. 1 of Zittel '785 and as discussed above, trunnions 66 are used as rotary bearings to rotatively support the journal. This is consistent with the fact that Zittel '785 fails to disclose, teach or suggest that any such seal, including seal 124 and its sealing strips 126 and 130, provides any kind of rotary bearing support or is capable of providing any kind of rotary bearing support.³

Therefore, each of these three references fails to disclose, teach or suggest, when taken alone or in combination with each other or any other reference of record, the generally U-shaped bearing cradle having a generally U-shaped rotary bearing surface defined in claim 5.

³ While applicants' claimed invention is directed to a generally U-shaped rotary bearing with a generally U-shaped rotary bearing surface that rotatively supports a rotary journal, the invention defined by claim 7 is intended to encompass such a bearing configuration that also seals.

As a result, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

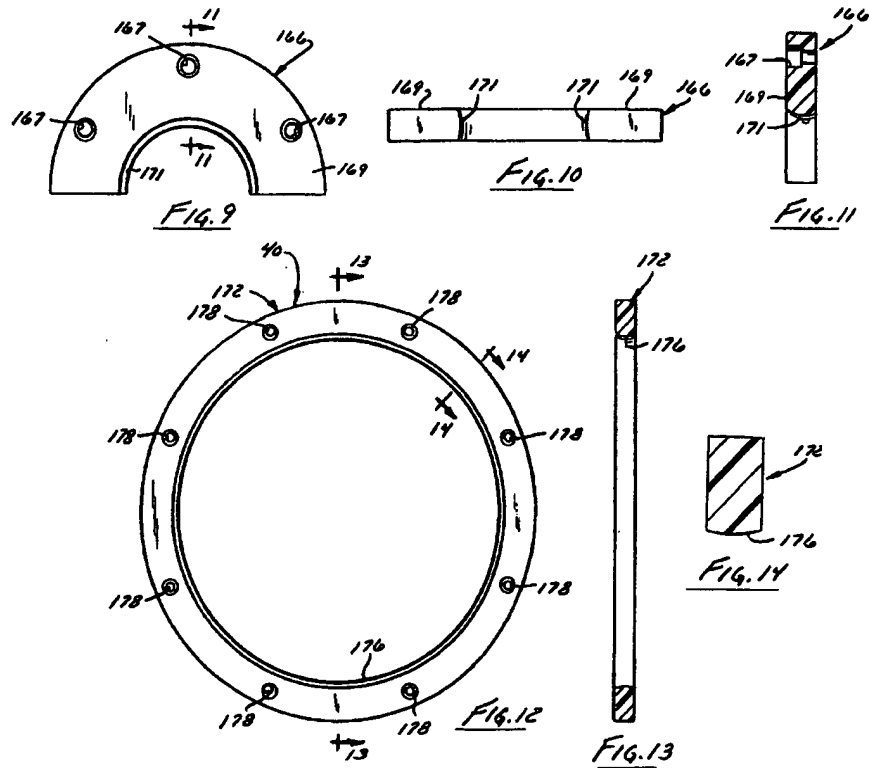
Dependent Claim 6

Dependent claim 6 has also been amended to better define applicants' invention by removing limitations previously presented or not necessary to distinguish over the prior art. Claim 6 depends from claim 5 and adds the further requirement that the auger is engaged with the produced processing chamber such that the auger and product processing chamber both rotate in unison. While claim 6 is believed allowable for at least the reasons set forth above in support of the patentability of claim 5, this claim is also believed patentable in its own right, especially when taken in combination with claim 5. For example, Dalos fails to disclose, teach or suggest an auger that includes generally helically extending auger flights. Therefore, claim 6 is believed presented in condition for allowance and its allowance is respectfully requested.

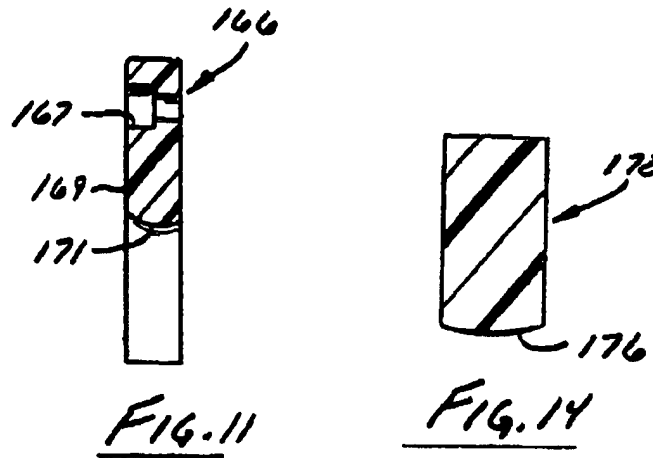
Dependent Claim 7

Dependent claim 7, which depends from independent claim 1, has also been amended to better define applicants' invention. While claim 7 is believed allowable for the same reasons as claim 1, the independent claim from which it depends, this claim is also believed to recite allowable subject matter independent from the subject matter recited in claim 1.

In this regard, claim 7 defines a rotary product processing device where each end plate carries a bearing of one-piece, non-metallic, and substantially homogenous construction that has a rotary bearing surface that rotatively supports a rotary journal and that is curved along an axial direction.



For example, applicants' Figs. 9-11 above depicts a first preferred bearing embodiment 166 capable of being carried by a rotary product processing device end plate with the bearing embodiment being of one-piece, non-metallic, and substantially homogenous construction having a rotary bearing surface 171 with a curvilinear outer bearing surface profile in an axial direction. Figs. 12-14 above illustrates a second preferred bearing embodiment 40 also capable of being carried by an end plate with it also being of one-piece, non-metallic, and substantially homogenous construction and having a rotary bearing surface 176 with a curvilinear outer profile in an axial direction.



These curvilinear outer rotary bearing surface profiles of corresponding rotary bearing surfaces 171 and 176 are shown above in more detail in enlarged applicants' Figs. 11 and 14. Such a curvilinear outer rotary bearing surface profile helps increase surface area of contact between the rotary bearing surface and the journal so as to ensure it is greater than that achieved by line contact between the rotary bearing surface and the journal. Such increased rotary bearing surface contact area with the journal advantageously helps reduce bearing wear.

None of Dalos, Zittel '707 nor Zittel '785, alone or combination, discloses, teaches or suggests a bearing of one-piece, unitary and substantially homogenous construction having a curvilinear outer bearing surface profile. Therefore, for at least these further reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claim 8

Dependent claim 8, which depends from independent claim 1, has also been amended to better define applicants' invention such that applicants' respectfully submit none of the Zittel nor Dalos references disclose, teach or suggest an arcuate bearing of one-piece, unitary, non-metallic and substantially homogenous construction having mounting apertures angularly spaced apart in a manner like that depicted in Figs. 9 and 12 (above) enabling bearing mounting to each one of the mounting plates in a manner that permits the bearing to be rotated and re-mounted such as to compensate for or otherwise accommodate bearing wear.

For example, where bearing wear becomes excessive, the claimed invention defined in claim 8 enables bearing fasteners to be removed from mounting apertures 178 (Fig. 12) in the claimed bearing so that the bearing can be rotated until its apertures 178 match-up once again with mounting bores in an end plate and the fasteners used to re-mount the bearing to the end plate once again. By providing the claimed configuration enabling the part of the bearing surface currently facing the most wear or too great of wear, it enables it to be rotated to a different position where it experiences less or no wear with another part of the bearing surface having been rotated into a position where it will experience the most wear.

Applicants' respectfully submit that claim 8 should be allowed because Dalos, Zittel '707 and Zittel '785, alone or in combination, fails to disclose, teach or suggest the claimed invention. As previously discussed, neither Zittel '707 nor Zittel '785 disclose, teach or suggest an arcuate bearing of one-piece, unitary, non-metallic and substantially homogenous construction as Zittel '707 and Zittel '785 only disclose trunnions. Dalos fails to disclose an arcuate non-metallic, substantially homogenous, one-piece /unitary bearing that has three mounting apertures enabling end plate mounting to a corresponding number of angularly indexable wear positions.

Therefore, in addition for being allowable at least for the reasons set forth in support of patentability of independent claim 1, claim 8 is believed presented in condition for allowance for the above reasons in its own right such that its allowance is respectfully requested.

Dependent Claim 9

Dependent claim 9 has also been amended to better define applicants' invention. As amended, this claim also distinguishes over the prior art, including the prior art of record.

Dependent claim 9, which depends from independent claim 1, has been amended to require each end plate to have an annular bearing arrangement immovably fixed and abutting against the end plate with it bounding the periphery of an infeed or discharge passage formed in the end plate and the inner radial surface of the bearing arrangement defining a rotary bearing surface that rotatively supports a product processing chamber or auger of the rotary product processing device. The claimed arrangement advantageously helps produce a rotary product

processing device having a compact footprint because the annular bearing arrangement abuts against the end plate to which it was immovably fixed with its inner radial surface being the rotary bearing surface that rotatively supports the rotary product processing chamber or the rotary auger. By each bearing arrangement bounding, e.g. encircling or encompassing, the corresponding product conveyance passage in the end plate to which the bearing arrangement is attached, the corresponding product infeed or discharge advantageously remains unobstructed by the corresponding immovably fixed bearing arrangement.

While the annular seal bearings 68 and 70 disclosed in Dalos have an inner radial surface, *it is not a rotary bearing surface that rotatively supports* any part of the environmental chamber 60 of the rotary composting device of Dalos. As previously noted above, Zittel '707 fails to disclose any such annular bearing arrangement, let alone one meeting all of the claim limitations recited in claim 9. Finally, as also previously discussed, the seal strips 126 and 130 of the seal 124 disclosed in Zittel '785 are not bearings. In addition, Zittel '785 only discloses rotary bearing support being provided by trunnions.

Therefore, in addition for being allowable at least for the reasons set forth in support of patentability of independent claim 1, claim 9 is believed presented in condition for allowance in its own right for the reasons set forth immediately above such that its allowance is respectfully requested.

Dependent Claim 10

Dependent claim 10, which depends from independent claim 1, has also been amended to better define applicants' invention. As amended, this claim also distinguishes over the prior art, including the prior art of record.

Dalos fails to disclose, teach or suggest a non-moving arcuate bearing *fixed* to each *end plate* as its front seal bearing 68 is not fixed to front support plate 72. Likewise, the rear seal bearing 70 disclosed in Dalos also is not fixed to rear support plate 74.

In addition, neither one of the arcuate bearings disclosed in Dalos, namely seal bearings 68 and 70, support anything corresponding to a journal structure of any component in Dalos that corresponds to a product processing chamber. More specifically, since the cylindrical container 62 disclosed in Dalos lacks any bearing journal or any structure that could be construed as

corresponding to a bearing journal, its stands to follow it cannot anticipate at least claim 10 because it fails to disclose this claim limitation.

Neither Zittel '707 nor Zittel '785 discloses, teaches or suggests an arcuate bearing fixed to each endplate as none of the trunnions disclosed in these references is arcuate. As previously discussed, the seal strips 126 and 130 of the seal 124 disclosed in Zittel '785 are not bearings.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claim 11

Dependent claim 11, which depends from independent claim 1, has also been amended to better define applicants' invention. As amended, this claim also distinguishes over the prior art, including the prior art of record.

Dalos fails to disclose, teach or suggest a non-moving arcuate bearing of one-piece, unitary, homogenous and non-metallic construction that is fixed to the frame at or adjacent the infeed and discharge ends because its front seal bearing 68 is not fixed to front support plate 72 and its rear seal bearing 70 is not fixed to rear support plate 74. In addition, neither seal bearing 68 or 70 has an elongate radially inner arcuate bearing surface that cradles and is in bearing surface contact with part of the outer circumference of an outwardly projecting circular journal that extends axially outwardly from a product processing chamber. In fact, Dalos fails to disclose any structure corresponding to a journal, let alone a circular journal that projects outwardly from a product processing chamber.

Neither Zittel '707 nor Zittel '785 discloses, teaches or suggests an arcuate bearing of one-piece, unitary, homogenous and non-metallic construction fixed to the frame at or adjacent the infeed and discharge ends because none of the trunnions disclosed in these references corresponds to the arcuate nor of one-piece, unitary, homogenous and non-metallic bearing that is defined in dependent claim 11. Zittel '707 clearly fails to disclose any structure similar to or which otherwise corresponds to the claimed bearing configuration. As previously discussed, the

seal strips 126 and 130 of the seal 124 disclosed in Zittel '785 are not bearings. In addition, there is no disclosure in Zittel that teaches or otherwise suggests that either seal strip 126 and 130 is fixed to blancher end walls 36 and/or 38.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claim 12

Dependent claim 12, which depends from independent claim 1, has also been amended to better define applicants' invention. As amended, this claim also distinguishes over the prior art, including the prior art of record.

Dalos fails to disclose, teach or suggest a product processing device having an end plate carrying a drive in a manner that locates it above a rotary product processing chamber with the drive overlying part of the rotary product processing chamber. Although the motor 76 disclosed in Dalos is carried by front support plate 72, it does not carry the motor 76 in a manner that locates it above environment chamber 60 let alone in a manner where it overlies the chamber 60. Rather, the motor 76 disclosed in Dalos extends outwardly from front support plate 72 away from the cylindrical container 62 that defines environmental chamber 60 inside of it. Since the motor 76 fails to overlap any part of chamber 60, it can neither lie above the chamber 60 nor overlie it.

Likewise, neither one of the Zittel '707 and '785 references discloses a drive carried by an end plate that locates the drive above the rotary apparatus 49 disclosed in the '707 reference nor the perforate drum 50 disclosed in the '785 reference, let alone it overlying the rotary apparatus 49 or the drum 50. Zittel '707 discloses a motor 62 that, like Dalos, is located outwardly of the product processing chamber that lies within rotary apparatus 49. Zittel '785 does nothing to cure the deficiencies of Dalos nor Zittel '707.

The claimed arrangement advantageously produces a rotary product processing device that has a smaller footprint because it locates the drive above the product processing chamber such that it overlies the rotary product processing chamber. In addition to its space-saving design, the drive is disposed in a safer out-of-the-way position helping to increase safety.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claim 13

Dependent claim 13, which depends from independent claim 1, has also been amended to better define applicants' invention and not for the purpose of distinguishing over the prior art. Yet, as amended, this claim also distinguishes over the prior art, including the prior art of record.

Dalos and Zittel '785 each fails to disclose the claimed sidewall panel and end wall configuration, let alone such a configuration where locator tabs are received in locator slots, which advantageously facilitates assembly. Zittel '707 does nothing to cure the deficiencies of Dalos and Zittel '785 because it also fails to disclose at least the claimed locator tab and locator slot configuration.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claim 14

Dependent claim 14, which depends from dependent claim 13, has also been amended to better define applicants' invention and not for the purpose of distinguishing over the prior art. Yet, as amended, this claim also distinguishes over the prior art, including the prior art of record.

None of the references of record, including Dalos, Zittel '785 and/or Zittel '707, alone or in combination with each other or another cited reference, discloses, teaches or suggests the claimed diagonal locator tab and slot configuration nor the self-fixturing frame that results that facilitates frame fabrication.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claim 15

Dependent claim 15, which depends from independent claim 1, has not been amended because, as presented, this claim is believed to distinguish over the prior art.

None of the references of record, including Dalos, Zittel '785 and/or Zittel '707, alone or in combination with each other or another cited reference, discloses, teaches or suggests any kind of a cover, such as cover 71 shown in applicants' Fig. 3, which overlies a drive assembly, such as drive arrangement 114 shown in applicants' Fig. 5, that overlies an end plate, such as end plate 50, to form a drive assembly housing, such as drive assembly enclosure 78. In Dalos, no such enclosure is formed with any either support plate 72 or 74 and a separate cover that overlies the support plate because Dalos lacks any component or structure that corresponds to the claimed cover.

The Zittel references are similarly deficient. For example, Zittel '707 fails to disclose any structure or component that corresponds to a cover and overlies the shaft 61, pulley 60 and belt and end plate 12 shown in Figs. 1 and 2 of Zittel '707.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claim 16

Dependent claim 16, which depends from independent claim 1, has also been amended to better define applicants' invention and not for the purpose of distinguishing over the prior art. Yet, as amended, this claim also distinguishes over the prior art, including the prior art of record.

None of the references of record, including Dalos, Zittel '785 and/or Zittel '707, alone or in combination with each other or another cited reference, discloses, teaches or suggests any kind of a non-metallic bearing cradle that rotatively supports one end of a perforate drum via an arcuate friction-bearing rotary bearing surface that is fixed relative to the frame.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claim 17

Dependent claim 17, which depends from independent claim 1, has also been amended to better define applicants' invention and not for the purpose of distinguishing over the prior art. Yet, as amended, this claim also distinguishes over the prior art, including the prior art of record.

None of the references of record, including Dalos, Zittel '785 and/or Zittel '707, alone or in combination with each other or another cited reference, discloses, teaches or suggests any kind of a orifice comprising conduit that overlies a product processing chamber with each conduit end received in a through-bore in each end plate, with each end plate being of one-piece and unitary construction. There simply is nothing disclosed in any of these cited patents that even remotely corresponds to the claimed configuration.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claim 18

Dependent claim 18, which depends from independent claim 1, has also been amended to better define applicants' invention and not for the purpose of distinguishing over the prior art. Yet, as amended, this claim also distinguishes over the prior art, including the prior art of record.

None of the references of record, including Dalos, Zittel '785 and/or Zittel '707, alone or in combination with each other or another cited reference, discloses, teaches or suggests any kind of an end plate that carries not just the drive but also the driveline that connects or couples the product urging auger to the drive with the drive being oriented so as to overlie at least part of the product processing chamber. As previously discussed, neither Dalos nor Zittel '707 disclose, teach or suggest a drive overlying any part of the product processing chamber because the motor disclosed in each cited reference extends outwardly away from any structure that could be construed as being a product processing chamber. Zittel '785 does nothing to remedy at least this deficiency in either reference because it fails to disclose any kind of a drive, let alone one that overlies any part of a product processing chamber.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claim 19

Dependent claim 19 has been canceled without prejudice.

Independent Claim 20

Independent claim 20 has also amended to better define applicants' invention. As amended, this claim also distinguishes over the prior art, including the prior art of record.

None of the references of record, including Dalos, Zittel '785 and/or Zittel '707, alone or in combination with each other or another cited reference, discloses, teaches or suggests a rotary product processing device having a frame of the claimed configuration that includes a bearing cradle fixed to each end plate of the frame that is of one-piece, unitary and homogenous polymeric construction with each bearing having a radially inwardly facing arcuate fixed bearing surface that rotatively supports a radially outwardly facing outer surface of a tubular and tubular product processing chamber.

The seal bearings 68 and 70 disclosed in Dalos are not fixed to its corresponding support plate 72 and 74 and neither one of the seal bearings 68 and 70 rotatively support anything via its radially inner surface. In addition, the seal bearings 68 and 70 are not fixed so as to rotatively support a product processing chamber. The seal strips 126 and 130 of the seal 124 disclosed in Zittel '785 is not a bearing and Zittel '707 only discloses trunnions.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claim 21

Dependent claim 21, which depends from independent claim 20, has also been amended to better define applicants' invention. Yet, as amended, this claim also distinguishes over the prior art, including the prior art of record.

None of the references of record, including Dalos, Zittel '785 and/or Zittel '707, alone or in combination with each other or another cited reference, discloses, teaches or suggests each bearing cradle being a ring-shaped bearing that encircles the outside of the corresponding outwardly facing product processing chamber end surface that is adjacent the bearing ring with the bearing surface of the bearing ring that contacts the outwardly facing product processing

chamber end surface being curved along an axial direction with axial being defined as being in a direction generally parallel to an axis of rotation of the product processing chamber.

In addition to Dalos being deficient for the reasons discussed above in support of patentability of claim 20, Dalos further fails to disclose, teach or suggest any outer bearing surface of either one of its seal bearings 68 and 70 being curved in or along an axial direction generally parallel to the axial direction of rotation of the environmental chamber 60. Neither Zittel '707 nor Zittel '785 does anything to overcome these deficiencies. The seal strips 126 and 130 of the seal 124 disclosed in Zittel '785 is not a bearing and Zittel '707 only discloses trunnions.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claim 22

Dependent claim 22, which depends from dependent claim 21, has also been amended to better define applicants' invention. As amended, this claim also distinguishes over the prior art, including the prior art of record.

None of the references of record, including Dalos, Zittel '785 and/or Zittel '707, alone or in combination with each other or another cited reference, discloses, teaches or suggests the curved outer bearing surface including an outer contour that is elliptical or spherical.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claims 23-25

Dependent claims 23-25 are believed presented in condition for allowance because they depend from independent claim 20, a claim believed presented in condition for allowance for the reasons in support of the patentability of independent claim 20 set forth above. In addition, claims 23-25 are each believed to independently define patentable subject matter. For example, Dalos fails to disclose, teach or suggest a fluid-holding tank that underlies its environmental

chamber with regard to claim 23 and fails to disclose, teach or suggest a generally helical auger as its directional vanes 130 do not correspond in any way to an auger with regard to claims 24 and 25, let alone a generally helical auger.

Therefore, for at least these reasons, each of these claims are believed presented in condition for allowance and allowance of each of these claims is respectfully requested.

Independent Claim 26

Independent claim 26 has also amended to better define applicants' invention. As amended, this claim also distinguishes over the prior art, including the prior art of record.

None of the references of record, including Dalos, Zittel '785 and/or Zittel '707, alone or in combination with each other or another cited reference, discloses, teaches or suggests a rotary product processing device having arcuate one-piece, non-metallic, and homogenous bearing cradles immovably fixed to each end plate with each bearing cradle having an arcuate radial bearing contact surface that encircles at least part of a inlet or outlet bore in the corresponding end plate. In addition, as previously discussed, none of these references, alone or in combination with each other or any other cited reference of record, discloses, teaches or suggest the bearing contact surface of at least one of the bearing cradles including an elliptical or spherical contoured contact surface portion.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claim 27

Dependent claim 27, which depends from independent claim 26, has not been amended but is believed to define patentable subject matter as it distinguishes over the cited prior art of record. In addition to being presented in condition for allowance for the reasons set forth above in support of patentability of independent claim 26, none of the references of record have the

claimed bearing cradle configuration and serve as both a rotary bearing and thrust bearing. For example, bearing cradle surface 169 of the bearing cradle 166 shown in applicants' Fig. 9 is a thrust bearing surface and bearing cradle surface 171 of this same bearing cradle 166 is a rotary bearing surface. The same is true of bearing cradle 168 shown in applicants' Fig. 2.

None of the references of record, including Dalos, Zittel '785 and/or Zittel '707, alone or in combination with each other or another cited reference, discloses, teaches or suggests the invention defined in claim 27. As previously mentioned, Dalos and Zittel '707 fail to disclose, teach or suggest the invention defined in independent claim 26. As it further pertains to Zittel '785, not only is the seal 124 disclosed in Zittel '785 not a bearing, it is clearly neither a rotary bearing nor a thrust bearing, let alone both a rotary bearing and a thrust bearing.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Independent Claim 28

Independent claim 28 has been amended to better define applicants' invention and not for the purposes of distinguishing over the prior art. Even without amendment, applicants respectfully submit that this claim distinguishes over the prior art, including the prior art of record.

While Dalos discloses annular seal bearings 68 and 70, neither one of the seal bearings 68 and 70 is fixed to a corresponding support plate 72 and 74, let alone be immovably fixed thereto. Zittel '707 fails to disclose any kind of an annular non-metallic bearing as this reference only discloses trunnions. Zittel '785 also discloses trunnions as the seal 126 disclosed in this reference is not a bearing, let alone a bearing immovably fixed to any end plate or end wall of the disclosed blancher.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Dependent Claim 29

Dependent claim 29, which depends from independent claim 28, has been amended to better define applicants' invention. Yet, as amended, this claim also distinguishes over the prior art, including the prior art of record.

In addition to being presented in condition for allowance for the reasons set forth above in support of patentability of independent claim 28, none of the references of record have the claimed bearing cradle configuration and serve as both a rotary bearing and thrust bearing. For example, bearing cradle surface 169 of the bearing cradle 166 shown in applicants' Fig. 9 is a thrust bearing surface and bearing cradle surface 171 of this same bearing cradle 166 is a rotary bearing surface. The same is true of bearing cradle 168 shown in applicants' Fig. 2. For example, none of the references of record, including Dalos, Zittel '785 and/or Zittel '707, alone or in combination with each other or another cited reference, discloses, teaches or suggests these claim limitations which are recited in claim 29.

In addition, none of the references of record disclose, teach or suggest at least one of the annular bearings being fixable using a plurality of pairs of fasteners, i.e. three or more fasteners, to one of a plurality of mounting positions enabling the bearing to be rotated so as to change the location of its wear position of its rotary bearing. In Dalos, rear seal bearing 70 is mounted to rear end cap 66 (but not the rear support plate 74) using only two fasteners and the front seal bearing 68 is mounted to front end cap 64 (but not the front support plate 72) using two pins 95 such that the aforementioned wear surface positioning claim limitations are not disclosed, taught or suggested by Dalos. In addition to the seal 124 of Zittel '785 not being a bearing, Zittel '785 further fails to disclose immovably fixing the seal 124, let alone doing so with a plurality of pairs of fasteners in a manner where it is fixable in one of a plurality of wear surface changing positions. Zittel '707 does nothing to overcome these deficiencies.

As previously discussed, none of these references disclose, teach or suggest a bearing having a curved rotary bearing surface contour as is further required by claim 29.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Independent Claim 30

Independent claim 30 has been amended to better define applicants' invention. As amended, this claim distinguishes over the prior art, including the prior art of record

None of the references of record, including Dalos, Zittel '707 and Zittel '785, alone or in combination with each other or another reference of record, disclose, teach or suggest the claimed arrangement including, in particular, (1) a drive mounted to one of the end plates and being located above and overlying part of the product processing chamber, and (2) a drive arrangement that is carried by the same end plate to which the drive is mounted that couples the drive to the product processing chamber with it having a drive wheel, a driven wheel and an endless flexible member, such as a belt, chain, cable or the like, with the endless flexible member being oriented generally perpendicular to the drive and generally parallel to the lengthwise direction of the end plate.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Independent Claim 31

Independent claim 31 has been amended to better define applicants' invention. As amended, this claim distinguishes over the prior art, including the prior art of record

None of the references of record, including Dalos, Zittel '707 and Zittel '785, alone or in combination with each other or another reference of record, disclose, teach or suggest the claimed arrangement including, in particular, (1) a drive carried by one of the end plates and overlying the product processing chamber, (2) a drive arrangement that is carried by the same end plate to which the drive is mounted that couples the drive to the product processing chamber with the drive arrangement extending along a vertically extending portion of the end plate in a lengthwise direction relative to the end plate, and (3) a vertically extending cover that is removably mounted to the end plate with the cover overlying both the drive arrangement and the end plate such that the drive arrangement is located between the cover and end plate.

The claimed arrangement advantageously minimizes the footprint of the rotary product processing device by locating the drive so it overlies the food product processing chamber. The claimed arrangement further advantageously safely locates the drive arrangement, e.g. such as the disclosed drive wheel, driven wheel and endless flexible member coupling the wheels, used

to couple the product processing chamber to the drive in between the end plate and a vertically extending cover that overlies at least part of the drive and arrangement and the end plate such as to preferably prevent a person adjacent the drive arrangement from inadvertently coming into contact with the drive arrangement during rotary product processing device operation.

Therefore, for at least these reasons, this claim is believed presented in condition for allowance and its allowance is respectfully requested.

Newly Presented Claims

Claims 32-36 are each newly presented and each believed to define patentable subject matter. Claim 32 adds the further requirement that the drive wheel defined in claim 3 have a through-bore or opening that also forms part of the infeed or discharge. Claim 33 is of similar scope as claim 32, but depends from independent claim 30. Claim 32 is believed presented in condition for allowance for at least the same reasons as discussed above in support of patentability of dependent claim 3 and/or independent claim 1. Claim 33 is believed presented in condition for allowance for at least the same reasons as discussed above in support of patentability of independent claim 30.

Independent claim 34 is believed presented in condition for allowance because none of the cited art of reference discloses, teaches or suggests the claimed invention, including in combination with the drive and drive arrangement's configuration in relation to the end plate to which the drive is mounted and the cover that mounts to the same end plate forming a housing that substantially encloses the drive arrangement.

Independent claim 35 is believed presented in condition for allowance because none of the cited art of reference discloses, teaches or suggests the claimed invention, including the recited combination where each annular bearing encircles either the inlet or infeed or the discharge and has a radial bearing contact surface that is either elliptical or spherical.

Independent claim 36 is believed presented in condition for allowance for at least the same reasons as independent claim 35 and also because the cited art of record further fails to disclose, teach or suggest the claimed rotary drive, drive arrangement and cover configuration.

For at least these reasons, newly presented claims 32-36 are believed presented in condition for allowance and their allowance is respectfully requested.

Conclusion and Petition for Extension of Time

The Commissioner is authorized to charge the amount of \$625 to cover the cost of presenting four additional claims over the number originally presented, for presenting three additional independent claims over the number originally presented, and for a two month extension of time from March 21, 2006 to May 22, 2006 (May 21st was a Sunday), all for a small entity. No other fees are believed to be payable with this communication. However, the Commissioner is authorized to charge any fees or credit any overpayment to Deposit Account No. 50-1170.

Applicant believes the application is now in condition for allowance and such action is earnestly requested. If the Examiner believes that a telephone interview with applicant's attorney would facilitate the prosecution and allowance of the application, the Examiner is invited to contact the attorney at the telephone number listed below.

Respectfully submitted,



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